12 AIR QUALITY

This section describes the projects impacts on air quality and contribution to regional air quality conditions, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the proposed Placer County Government Center Master Plan Update Project (PCGC Master Plan Update or proposed project), including the Health and Human Services building and the Multifamily Residential project at 1st Street and B Avenue, as described in Chapter 3, Project Description. The analysis in this chapter is taken from the California Emissions Estimator Model (CalEEMod) (Version 2016.3.2) modeling prepared for the project, provided in Appendix G.

One comment was received in response to the Notice of Preparation for this EIR that addresses air quality. The Placer County Air Pollution Control District (PCAPCD) provided information related to the details of the project description relevant to the air quality analysis, the thresholds of significance the PCAPCD has adopted, recommended methodology for the air pollutant emissions modeling, and mitigation measure recommendations. The Notice of Preparation and comments received in response to it are provided in Appendix A.

12.1 EXISTING CONDITIONS

Air quality is affected by the rate, amount, and location of pollutant emissions and the associated meteorological conditions that influence pollutant movement and dispersal. Atmospheric conditions (for example, wind speed, wind direction, and air temperature) in combination with local surface topography (for example, geographic features such as mountains and valleys), determine how air pollutant emissions affect local air quality.

The proposed project is located in central Placer County, which lies within the Sacramento Valley Air Basin (SVAB) and is within the jurisdictional boundaries of the PCAPCD. Air quality in the vicinity is influenced by both local and distant emission sources. Local sources include the emissions from vehicle traffic on nearby roadways, area sources such as landscaping maintenance, and stationary sources such as residential woodstoves and barbeques as well as local industry. Distant emission sources include the vehicle traffic and various industries in the Sacramento metropolitan area and beyond. Carried to the foothills region by the prevailing southwesterly winds found in the valley, pollutants emitted in Sacramento and the San Francisco Bay area affect local ambient pollutant concentrations. Inversion layers occur when a layer of warm air traps a layer of cold air beneath it, preventing vertical dispersion of air contaminants. These layers are created by seasonal temperatures and contribute to seasonal concentrations of airborne contaminants, elevating air pollution levels.

Climate

Mild, wet winters and hot, dry summers characterize the climate of central and western Placer County. Precipitation generally occurs between November and April. Prevailing winds are from

the south and southwest, and local air quality is influenced by the transportation of emissions from upwind mobile and stationary pollution sources in south Placer County, the Sacramento metropolitan area, and the San Francisco Bay area. Additionally, in the late fall and early spring the SVAB frequently experiences calm atmospheric conditions, contributing to the creation of inversion layers, which results in higher concentrations of pollutants near ground level.

Pollutants and Effects

Criteria Air Pollutants

Ozone (O_3), carbon monoxide (CO), and particulate matter (PM_{10}) are pollutants of particular concern in the area. Under the air quality standards mandated by the California Clean Air Act, the SVAB is currently in non-attainment for particulate matter and is designated as serious non-attainment for O_3. This air basin is also in non-attainment for federal O_3 standards under the Federal Clean Air Act. South Placer County is a federal maintenance area for carbon monoxide standards. This region was in non-attainment for federal CO standards until 1998. As shown in the tables included in this discussion, violations of O_3 and particulate matter standards have occurred and continue to occur within the region.

Ozone

O_3 is a strong-smelling, pale blue, reactive, toxic chemical gas consisting of three oxygen atoms. It is a secondary pollutant formed in the atmosphere by a photochemical process involving the sun's energy and O_3 precursors. These precursors are mainly oxides of nitrogen (NO_x) and reactive organic gases (ROG, also termed volatile organic compounds [VOCs]). The maximum effects of precursor emissions on O_3 concentrations usually occur several hours after they are emitted and many miles from the source. Meteorology and terrain play major roles in O_3 formation, and ideal conditions occur during summer and early autumn on days with low wind speeds or stagnant air, warm temperatures, and cloudless skies. O_3 exists in the upper atmosphere O_3 layer (stratospheric ozone) and at the Earth's surface in the troposphere (ozone).[1] The O_3 that the U.S. Environmental Protection Agency (EPA) and the California Air Resources Board (CARB) regulate as a criteria air pollutant is produced close to the ground level, where people live, exercise, and breathe. Ground-level O_3 is a harmful air pollutant that causes numerous adverse health effects and is thus considered "bad" O_3. Stratospheric, or "good," O_3 occurs naturally in the upper atmosphere, where it reduces the amount of ultraviolet light (i.e., solar radiation) entering the Earth's atmosphere. Without the protection of the beneficial stratospheric O_3 layer, plant and animal life would be seriously harmed.

O_3 in the troposphere causes numerous adverse health effects; short-term exposures (lasting for a few hours) can result in breathing pattern changes, reduction of breathing capacity, increased

[1] The troposphere is the layer of the Earth's atmosphere nearest to the surface of the Earth. The troposphere extends outward about 5 miles at the poles and about 10 miles at the equator.

susceptibility to infections, inflammation of the lung tissue, and some immunological changes (EPA 2013). These health problems are particularly acute in sensitive receptors such as the sick, the elderly, and young children.

Carbon Monoxide

CO is a colorless, odorless gas formed by the incomplete combustion of hydrocarbon, or fossil fuels. CO is emitted almost exclusively from motor vehicles, power plants, refineries, industrial boilers, ships, aircraft, and trains. In urban areas, automobile exhaust accounts for the majority of CO emissions. CO is a nonreactive air pollutant that dissipates relatively quickly; therefore, ambient CO concentrations generally follow the spatial and temporal distributions of vehicular traffic. CO concentrations are influenced by local meteorological conditions—primarily wind speed, topography, and atmospheric stability. CO from motor vehicle exhaust can become locally concentrated when surface-based temperature inversions are combined with calm atmospheric conditions, which is a typical situation at dusk in urban areas from November to February. The highest levels of CO typically occur during the colder months of the year, when inversion conditions are more frequent.

In terms of adverse health effects, CO competes with oxygen, often replacing it in the blood, reducing the blood's ability to transport oxygen to vital organs. The results of excess CO exposure can include dizziness, fatigue, and impairment of central nervous system functions.

Particulate Matter

Particulate matter pollution consists of very small liquid and solid particles floating in the air, which can include smoke, soot, dust, salts, acids, and metals. Particulate matter can form when gases emitted from industries and motor vehicles undergo chemical reactions in the atmosphere. $PM_{2.5}$ and PM_{10} represent fractions of particulate matter. Coarse particulate matter (PM_{10}) consists of particulate matter that is 10 microns or less in diameter and is about 1/7 the thickness of a human hair. Major sources of PM_{10} include crushing or grinding operations; dust stirred up by vehicles traveling on roads; wood-burning stoves and fireplaces; dust from construction, landfills, and agriculture; wildfires and brush/waste burning; industrial sources; windblown dust from open lands; and atmospheric chemical and photochemical reactions. Fine particulate matter ($PM_{2.5}$) consists of particulate matter that is 2.5 microns or less in diameter and is roughly 1/28 the diameter of a human hair. $PM_{2.5}$ results from fuel combustion (e.g., from motor vehicles and power generation and industrial facilities), residential fireplaces, and woodstoves. In addition, $PM_{2.5}$ can be formed in the atmosphere from gases such as sulfur oxides (SO_x), NO_x, and ROG.

$PM_{2.5}$ and PM_{10} pose a greater health risk than larger-size particles. When inhaled, these tiny particles can penetrate the human respiratory system's natural defenses and damage the respiratory tract. $PM_{2.5}$ and PM_{10} can increase the number and severity of asthma attacks, cause or aggravate bronchitis and

other lung diseases, and reduce the body's ability to fight infections. Very small particles of substances such as lead, sulfates, and nitrates can cause lung damage directly or be absorbed into the blood stream, causing damage elsewhere in the body. Additionally, these substances can transport adsorbed gases such as chlorides or ammonium into the lungs, also causing injury. Whereas PM_{10} tends to collect in the upper portion of the respiratory system, $PM_{2.5}$ is so tiny that it can penetrate deeper into the lungs and damage lung tissue. Suspended particulates also damage and discolor surfaces on which they settle and produce haze and reduce regional visibility.

People with influenza, people with chronic respiratory and cardiovascular diseases, and the elderly may suffer worsening illness and premature death as a result of breathing particulate matter. People with bronchitis can expect aggravated symptoms from breathing in particulate matter. Children may experience a decline in lung function due to breathing in PM_{10} and $PM_{2.5}$ (EPA 2009).

Non-Criteria Air Pollutants

Toxic Air Contaminants. A substance is considered toxic if it has the potential to cause adverse health effects in humans, including increasing the risk of cancer upon exposure, or acute and/or chronic noncancer health effects. A toxic substance released into the air is considered a TAC. TACs are identified by federal and state agencies based on a review of available scientific evidence. In the State of California, TACs are identified through a two-step process that was established in 1983 under the Toxic Air Contaminant Identification and Control Act. This two-step process of risk identification and risk management and reduction was designed to protect residents from the health effects of toxic substances in the air. In addition, the California Air Toxics "Hot Spots" Information and Assessment Act, Assembly Bill (AB) 2588, was enacted by the Legislature in 1987 to address public concern over the release of TACs into the atmosphere. The law requires facilities emitting toxic substances to provide local air pollution control districts with information that will allow an assessment of the air toxics problem, identification of air toxics emissions sources, location of resulting hotspots, notification of the public exposed to significant risk, and development of effective strategies to reduce potential risks to the public over 5 years.

Examples include certain aromatic and chlorinated hydrocarbons, certain metals, and asbestos. TACs are generated by a number of sources, including stationary sources, such as dry cleaners, gas stations, combustion sources, and laboratories; mobile sources, such as automobiles; and area sources, such as landfills. Adverse health effects associated with exposure to TACs may include carcinogenic (i.e., cancer-causing) and noncarcinogenic effects. Noncarcinogenic effects typically affect one or more target organ systems and may be experienced on either short-term (acute) or long-term (chronic) exposure to a given TAC.

Diesel Particulate Matter. Diesel particulate matter (DPM) is part of a complex mixture that makes up diesel exhaust. Diesel exhaust is composed of two phases, gas and particle, both of which

contribute to health risks. More than 90% of DPM is less than 1 micrometer in diameter (about 1/70 the diameter of a human hair) and, thus, is a subset of $PM_{2.5}$ (CARB 2016a). DPM is typically composed of carbon particles ("soot," also called black carbon) and numerous organic compounds, including over 40 known cancer-causing organic substances. Examples of these chemicals include polycyclic aromatic hydrocarbons, benzene, formaldehyde, acetaldehyde, acrolein, and 1,3-butadiene (CARB 2016a). CARB classified "particulate emissions from diesel-fueled engines" (i.e., DPM; 17 CCR 93000) as a TAC in August 1998. DPM is emitted from a broad range of diesel engines: on-road diesel engines of trucks, buses, and cars and off-road diesel engines, including locomotives, marine vessels, and heavy-duty construction equipment, among others. Approximately 70% of all airborne cancer risk in California is associated with DPM (CARB 2000). To reduce the cancer risk associated with DPM, CARB adopted a diesel risk reduction plan in 2000 (CARB 2000). Because it is part of $PM_{2.5}$, DPM also contributes to the same noncancer health effects as $PM_{2.5}$ exposure. These effects include premature death; hospitalizations and emergency department visits for exacerbated chronic heart and lung disease, including asthma; increased respiratory symptoms; and decreased lung function in children. Several studies suggest that exposure to DPM may also facilitate development of new allergies (CARB 2016a). Those most vulnerable to noncancer health effects are children whose lungs are still developing and the elderly who often have chronic health problems.

Odorous Compounds. Odors are generally regarded as an annoyance rather than a health hazard. Manifestations of a person's reaction to odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache). The ability to detect odors varies considerably among the population and overall is quite subjective. People may have different reactions to the same odor. An odor that is offensive to one person may be perfectly acceptable to another (e.g., coffee roaster). An unfamiliar odor is more easily detected and is more likely to cause complaints than a familiar one. Known as odor fatigue, a person can become desensitized to almost any odor, and recognition may only occur with an alteration in the intensity. The occurrence and severity of odor impacts depend on the nature, frequency, and intensity of the source; wind speed and direction; and the sensitivity of receptors.

The nearest existing source of odors is the Placer County Wastewater Treatment Plant (WWTP), which is located on Joeger Road about 1.5 miles north of the proposed project and Recology Auburn Placer disposal facility, which is located on Shale Ridge Road about 1.0 miles north-northeast of the proposed project.

Sensitive Receptors

Some land uses are considered more sensitive to changes in air quality than others, depending on the population groups and the activities involved. People most likely to be affected by air pollution

include children, the elderly, athletes, and people with cardiovascular and chronic respiratory diseases. Facilities and structures where these air-pollution-sensitive people live or spend considerable amounts of time are known as sensitive receptors. Land uses where air-pollution-sensitive individuals are most likely to spend time include schools and schoolyards, parks and playgrounds, daycare centers, nursing homes, hospitals, and residential communities (sensitive sites or sensitive land uses) (CARB 2005).

The County contains numerous sensitive receptors within the project area including residences, several schools, medical care facilities, and senior living facilities. In addition, the proposed project would result in the development of multifamily residences, which would be considered sensitive receptors. Table 12-1 below describes the sensitive receptors nearest to the proposed project.

Table 12-1
Sensitive Receptors located near the Project Area

Type	Name	Distance from Project Site (Miles)	Direction From Project Site
Residential	Ian Lane	0.01	North
	Atwood Road	0.01	South
	Harness Court/Birdie Court	0.01	South
	Cottage Drive	0.01	East
Schools	Saint Joseph Catholic School	0.09	South
	Rock Creek Elementary School	0.15	Northeast
	Auburn Elementary School	0.17	South
Medical	UC Davis Medical Group (Bell Road)	0.02	North
	UC Davis Medical Group (Professional Drive)	0.02	East
	Sutter Medical Group	0.04	East
	Kindred Transitional Care and Rehabilitation	0.06	North
	Auburn Oaks Care Center	0.07	Northwest
	DaVita Auburn Dialysis	0.10	East
Senior Living	Oakwood Village Retirement Community	0.04	North
	Brookdale Auburn	0.07	North
	Solstice Senior Living	0.07	North
	Sierra Ridge Memory Care	0.07	North

Sources: Sensitive receptors identified from Google Earth.

Local Ambient Air Quality

CARB, air districts, and other agencies monitor ambient air quality at approximately 250 air quality monitoring stations across the state. The SMAQMD monitors local ambient air quality at the project site. Air quality monitoring stations usually measure pollutant concentrations 10 feet above ground level; therefore, air quality is often referred to in terms of ground-level concentrations. The most recent background ambient air quality data from 2015 to 2017 are presented in Table 12-2. The Auburn monitoring station, located at 11645 Atwood Road, California 95603, is the nearest air quality monitoring station to the project site, which is located in the southeast corner of the project site. Air quality data for O_3 and $PM_{2.5}$ from the Auburn monitoring station monitoring station are provided in Table 12-2. Because CO, SO_2, NO_2, and $PM_{2.5}$ are not monitored at the Auburn monitoring station, NO_2 and PM_{10} measurements were taken from the Roseville monitoring station (51 North Sunrise Avenue, California 95661, approximately 15.7 miles southwest from the project site). The air quality data for CO measurements were taken from the Antelope monitoring station (7823 Blackfoot Way, California 95843, approximately 21.2 miles southwest from the project site). The data collected these stations are considered representative of the air quality experienced in the project vicinity. The number of days exceeding the ambient air quality standards is also shown in Table 12-2.

Table 12-2
Local Ambient Air Quality Data

Monitoring Station	Unit	Averaging Time	Agency/ Method	Ambient Air Quality Standard	Measured Concentration by Year			Exceedances by Year		
					2015	*2016*	*2017*	*2015*	*2016*	*2017*
Ozone (O_3)										
Auburn	ppm	Maximum 1-hour concentration	State	0.09	0.109	0.114	0.111	4	5	3
	ppm	Maximum 8-hour concentration	State	0.070	0.100	0.100	0.084	16	27	30
			Federal	0.070	0.100	0.099	0.084	15	27	28
Nitrogen Dioxide (NO_2)										
Roseville	ppm	Maximum 1-hour concentration	State	0.18	0.050	0.050	0.052	0	0	0
			Federal	0.100	0.0508	0.050	0.0528	0	0	0
	ppm	Annual concentration	State	0.030	0.013	0.012	0.012	10	8	8
			Federal	0.053	–	–	–	–	–	–
Carbon Monoxide (CO)										
Antelope	ppm	Maximum 1-hour concentration	State	20	–	–	–	–	–	–
			Federal	35	2.1	2.3	1.6	0	0	0
	ppm	Maximum 8-hour concentration	State	9.0	–	–	–			
			Federal	9	1.3	1.6	1.3	0	0	0

Table 12-2
Local Ambient Air Quality Data

Monitoring Station	Unit	Averaging Time	Agency/ Method	Ambient Air Quality Standard	Measured Concentration by Year			Exceedances by Year		
					2015	*2016*	*2017*	*2015*	*2016*	*2017*
Coarse Particulate Matter (PM_{10})[b]										
Roseville	μg/m³	Maximum 24-hour concentration	State	50	59.1	39.1	65.8	ND (1)	ND (0)	ND (5)
			Federal	150	35.7	39.2	66.0	ND (0)	0.0 (0)	0.0 (0)
	μg/m³	Annual concentration	State	20	ND	ND	ND	–	–	–
Fine Particulate Matter ($PM_{2.5}$)[b]										
Auburn	μg/m³	Maximum 24-hour concentration	Federal	35	109.8	28.6	29.7	1.0 (1)	0.0 (0)	0.0 (0)
	μg/m³	Annual concentration	State	12	ND	5.9	5.7	–	–	–
			Federal	12.0	7.0	6.8	6.5	–	–	–

Sources: CARB 2018; EPA 2017.
Notes: — = data not available; μg/m3 = micrograms per cubic meter; ND = insufficient data available to determine the value; ppm = parts per million
Data taken from CARB iADAM (http://www.arb.ca.gov/adam) and EPA AirData (http://www.epa.gov/airdata/) represent the highest concentrations experienced over a given year.
Exceedances of federal and state standards are only shown for O_3 and particulate matter. Daily exceedances for particulate matter are estimated days because PM_{10} and $PM_{2.5}$ are not monitored daily. All other criteria pollutants did not exceed federal or state standards during the years shown. There is no federal standard for 1-hour ozone, annual PM_{10}, or 24-hour SO_2, nor is there a state 24-hour standard for $PM_{2.5}$.
Auburn Monitoring Station is located at 11645 Atwood Road, Auburn, California 95603.
Roseville Monitoring Station is located at 51 North Sunrise Avenue, Roseville, California 95661.
Antelope Monitoring Station is located at 7823 Blackfoot Way, Antelope, California 95843.
[a] Mean does not satisfy minimum data completeness criteria.
[b] Measurements of PM_{10} and $PM_{2.5}$ are usually collected every 6 days and every 1 to 3 days, respectively. Number of days exceeding the standards is a mathematical estimate of the number of days concentrations would have been greater than the level of the standard had each day been monitored. The numbers in parentheses are the measured number of samples that exceeded the standard.

Health Effects

Air pollution affects everyone to some degree, however pregnant women, children, the elderly, and people with respiratory or cardiovascular disease are more susceptible to experiencing health effects from air pollution. Even at low concentrations, ground-level O_3 can adversely affect everyone (EPA 2000a). In relatively low concentrations, O_3 can damage vegetation, crack rubber, and irritate the lungs and respiratory system when inhaled. At higher concentrations, O_3 can impact public health by directly affecting the lungs, causing respiratory irritation and reduction in lung function. Lung flow and air passage through lung tissues can be seriously decreased, resulting in symptoms such as coughs, chest discomfort, headaches, and eye irritation. "Repeated exposure to ozone pollution for several months may cause permanent lung damage" (EPA 2000a). Persons suffering from asthma, bronchitis, other respiratory ailments, and cardiovascular disease are particularly susceptible to O_3, as well as children and persons engaged in heavy exercise, but "even

healthy people that are active outdoors can be affected when ozone levels are high" (EPA 2000a). At high concentrations, this pollutant can cause severe damage to the lungs.

Inhaled CO passes through the lungs to enter the blood stream, interfering with the transfer of oxygen to the blood. This reduces the amount of oxygen that reaches the muscles, including the heart, brain, and other body tissues – resulting in adverse cardiovascular and central nervous system effects. Even in healthy adults, CO inhalation can result in drowsiness, fatigue, inability to concentrate, nausea, headache, changes in heart function, impairment of vision, and slowed reflexes. At very high concentrations, CO inhalation can be fatal (EPA 2000b).

Particulate matter causes harm when inhaled particulates lodge deep within the lungs, causing health problems as the human immune system reacts to the presence of these foreign particles. Fine particles can lodge deeper within the lungs than coarse particles, posing a more serious health threat. Scientific studies have linked inhaled PM to several significant health problems, including "aggravated asthma, increases in respiratory symptoms like coughing and difficult or painful breathing, chronic bronchitis, decreased lung function, and premature death" (EPA 2000c). Very small particulates of certain substances can cause direct lung damage or can contain absorbed gasses that may be harmful. Populations that are especially sensitive to the health effects of exposure to particulate matter include children, the elderly, exercising adults, individuals with influenza, asthmatics, and those who suffer from chronic obstructive pulmonary disease. "Health problems for sensitive people can get worse if they are exposed to high levels of PM for several days in a row" (EPA 2000c), and "both short- and long-term exposures to PM have been shown to lead to harmful health effects" (CARB 2003b). Recent studies suggest that prolonged exposure to PM may affect the growth and functioning of children's lungs; other studies have found an association between fine particle air pollution and premature death related to decreases in cardiopulmonary functions. "In addition, scientists have observed higher rates of hospitalizations, emergency room visits and doctor's visits for respiratory illnesses or heart disease during times of high PM concentrations" (CARB 2003b).

12.2 REGULATORY FRAMEWORK

The proposed project is in the SVAB, one of 14 air basins in the state; Placer County is one of 11 counties within this air basin. PCAPCD has the primary responsibility for attainment and maintenance of air quality standards within their jurisdiction. The project area is also subject to the regulations of the Sacramento Air Quality Maintenance Area, CARB, and EPA. Both the State of California and the EPA have established and published air quality standards as shown in Table 12-2. The *Sacramento Regional 8-Hour Ozone Attainment and Reasonable Further Progress Plan (2017 Draft SIP Revisions)* (PCAPCD et al 2017b), which addresses attainment of the federal 8-hour O_3 standard, as well as the *2015 Triennial Progress Report* (SMAQMD 2016), which addresses attainment of the state O_3 standard, are the latest plans issued by the PCAPCD.

Additionally, the Lead Agency will use the policies contained in the Placer County General Plan and the Auburn/Bowman Community Plan related to air quality to evaluate the proposed project. This section provides a list of those policies, ordinances, and regulations that will be used to evaluate and implement this project.

Federal Regulations

Criteria Air Pollutants

The federal Clean Air Act, passed in 1970 and last amended in 1990, forms the basis for the national air pollution control effort. The EPA is responsible for implementing most aspects of the Clean Air Act, including setting NAAQS for major air pollutants; setting hazardous air pollutant (HAP) standards; approving state attainment plans; setting motor vehicle emission standards; issuing stationary source emission standards and permits; and establishing acid rain control measures, stratospheric O_3 protection measures, and enforcement provisions. Under the Clean Air Act, NAAQS are established for the following criteria pollutants: O_3, CO, NO_2, SO_2, PM_{10}, $PM_{2.5}$, and lead.

The NAAQS describe acceptable air quality conditions designed to protect the health and welfare of the citizens of the nation. The NAAQS (other than for O_3, NO_2, SO_2, PM_{10}, $PM_{2.5}$, and those based on annual averages or arithmetic mean) are not to be exceeded more than once per year. NAAQS for O_3, NO_2, SO_2, PM_{10}, and $PM_{2.5}$ are based on statistical calculations over 1- to 3-year periods, depending on the pollutant. The Clean Air Act requires the EPA to reassess the NAAQS at least every 5 years to determine whether adopted standards are adequate to protect public health based on current scientific evidence. States with areas that exceed the NAAQS must prepare a state implementation plan that demonstrates how those areas will attain the standards within mandated time frames.

State Regulations

Criteria Air Pollutants

The federal Clean Air Act delegates the regulation of air pollution control and the enforcement of the NAAQS to the states. In California, the task of air quality management and regulation has been legislatively granted to CARB, with subsidiary responsibilities assigned to air quality management districts and air pollution control districts at the regional and county levels. CARB, which became part of the California Environmental Protection Agency in 1991, is responsible for ensuring implementation of the California Clean Air Act of 1988, responding to the federal Clean Air Act, and regulating emissions from motor vehicles and consumer products.

CARB has established CAAQS, which are generally more restrictive than the NAAQS. The CAAQS describe adverse conditions; that is, pollution levels must be below these standards before a basin can attain the standard. Air quality is considered "in attainment" if pollutant levels are continuously below the CAAQS and violate the standards no more than once each year. The CAAQS for O_3, CO, SO_2 (1-hour and 24-hour), NO_2, PM_{10}, and $PM_{2.5}$ and visibility-reducing particles are values that are not to be exceeded. All others are not to be equaled or exceeded. The NAAQS and CAAQS are presented in Table 12-3.

Table 12-3
Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards[a]	National Standards[b]	
		Concentration[c]	*Primary*[c,d]	*Secondary*[c,e]
O_3	1 hour	0.09 ppm (180 μg/m³)	—	Same as Primary Standard[f]
	8 hours	0.070 ppm (137 μg/m³)	0.070 ppm (137 μg/m³)[f]	
NO_2[g]	1 hour	0.18 ppm (339 μg/m³)	0.100 ppm (188 μg/m³)	Same as Primary Standard
	Annual Arithmetic Mean	0.030 ppm (57 μg/m³)	0.053 ppm (100 μg/m³)	
CO	1 hour	20 ppm (23 mg/m³)	35 ppm (40 mg/m³)	None
	8 hours	9.0 ppm (10 mg/m³)	9 ppm (10 mg/m³)	
SO_2[h]	1 hour	0.25 ppm (655 μg/m³)	0.075 ppm (196 μg/m³)	—
	3 hours	—	—	0.5 ppm (1,300 μg/m³)
	24 hours	0.04 ppm (105 μg/m³)	0.14 ppm (for certain areas)[g]	—
	Annual	—	0.030 ppm (for certain areas)[g]	—
PM_{10}[i]	24 hours	50 μg/m³	150 μg/m³	Same as Primary Standard
	Annual Arithmetic Mean	20 μg/m³	—	
$PM_{2.5}$[i]	24 hours	—	35 μg/m³	Same as Primary Standard
	Annual Arithmetic Mean	12 μg/m³	12.0 μg/m³	15.0 μg/m³
Lead[j,k]	30-day Average	1.5 μg/m³	—	—
	Calendar Quarter	—	1.5 μg/m³ (for certain areas)[k]	Same as Primary Standard
	Rolling 3-Month Average	—	0.15 μg/m³	

Table 12-3
Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards[a]	National Standards[b]	
		Concentration[c]	*Primary*[c,d]	*Secondary*[c,e]
Hydrogen sulfide	1 hour	0.03 ppm (42 µg/m^3)	—	—
Vinyl chloride[j]	24 hours	0.01 ppm (26 µg/m^3)	—	—
Sulfates	24- hours	25 µg/m^3	—	—
Visibility reducing particles	8 hour (10:00 a.m. to 6:00 p.m. PST)	Insufficient amount to produce an extinction coefficient of 0.23 per kilometer due to the number of particles when the relative humidity is less than 70%	—	—
Visibility reducing particles	8 hour (10:00 a.m. to 6:00 p.m. PST)	Insufficient amount to produce an extinction coefficient of 0.23 per kilometer due to the number of particles when the relative humidity is less than 70%	—	—

Source: CARB 2016b.

Notes: µg/m^3 = micrograms per cubic meter; CO = carbon monoxide; mg/m^3= milligrams per cubic meter; NO_2 = nitrogen dioxide; O_3 = ozone; PM_{10} = particulate matter with an aerodynamic diameter less than or equal to 10 microns; $PM_{2.5}$ = particulate matter with an aerodynamic diameter less than or equal to 2.5 microns; ppm = parts per million by volume; SO_2 = sulfur dioxide

a California standards for O_3, CO, SO_2 (1-hour and 24-hour), NO_2, suspended particulate matter (PM_{10}, $PM_{2.5}$), and visibility-reducing particles are values that are not to be exceeded. All others are not to be equaled or exceeded. CAAQS are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

b National standards (other than O_3, NO_2, SO_2, particulate matter, and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once per year. The O_3 standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over 3 years, is equal to or less than the standard. For PM_{10}, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m^3 is equal to or less than 1. For $PM_{2.5}$, the 24-hour standard is attained when 98% of the daily concentrations, averaged over 3 years, are equal to or less than the standard.

c Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based on a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

d National Primary Standards: The levels of air quality necessary, with an adequate margin of safety, to protect the public health.

e National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

f On October 1, 2015, the EPA Administrator signed the notice for the final rule to revise the primary and secondary NAAQS for O_3. The EPA is revising the levels of both standards from 0.075 ppm to 0.070 ppm and retaining their indicators (O_3), forms (fourth-highest daily maximum, averaged across 3 consecutive years) and averaging times (8 hours). The EPA is in the process of submitting the rule for publication in the Federal Register. The final rule will be effective 60 days after the date of publication in the Federal Register. The lowered national 8-hour standards are reflected in the table.

g To attain the national 1-hour standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 parts per billion (ppb). Note that the national 1-hour standard is in units of ppb. California standards are in units of ppm. To directly compare the national 1-hour standard to the California standards, the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.

[h] On June 2, 2010, a new 1-hour SO_2 standard was established, and the existing 24-hour and annual primary standards were revoked. To attain the national 1-hour standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 national standards (24-hour and annual) remain in effect until 1 year after an area is designated for the 2010 standard, except that in areas designated nonattainment of the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.

[i] On December 14, 2012, the national annual $PM_{2.5}$ primary standard was lowered from 15 μg/m^3 to 12.0 μg/m^3. The existing national 24-hour $PM_{2.5}$ standards (primary and secondary) were retained at 35 μg/m^3, as was the annual secondary standard of 15 μg/m^3. The existing 24-hour PM_{10} standards (primary and secondary) of 150 μg/m^3 were also retained. The form of the annual primary and secondary standards is the annual mean averaged over 3 years.

[j] CARB has identified lead and vinyl chloride as TACs with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

[k] The national standard for lead was revised on October 15, 2008, to a rolling 3-month average. The 1978 lead standard (1.5 μg/m^3 as a quarterly average) remains in effect until 1 year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.

In 1988, California passed the California Clean Air Act (California Health and Safety Code Sections 39600 et seq.), which, like its federal counterpart, called for the designation of areas as "attainment" or "nonattainment", but based on CAAQS rather than the NAAQS. Table 12-4 shows the current attainment status of the proposed project area with respect to the NAAQS and CAAQS.

Table 12-4
Project Area Attainment Classification

Pollutant	Designation/Classification	
	Federal Standards	*State Standards*
Ozone (O_3) – 1 hour	No Federal Standard	**Nonattainment**
Ozone (O_3) – 8 hour	**Moderate Nonattainment**	**Nonattainment**
Nitrogen Dioxide (NO_2)	Unclassifiable/Attainment	Attainment
Carbon Monoxide (CO)	Unclassifiable/Attainment	Attainment
Sulfur Dioxide (SO_2)	Unclassifiable/Attainment	Attainment
Coarse Particulate Matter (PM_{10})	Unclassifiable/Attainment	**Nonattainment**
Fine Particulate Matter ($PM_{2.5}$)	**Moderate Nonattainment**	Attainment
Lead (Pb)	Unclassifiable/Attainment	Attainment
Hydrogen Sulfide	No Federal Standard	Unclassified
Sulfates	No Federal Standard	Attainment
Visibility-Reducing Particles	No Federal Standard	Unclassified
Vinyl Chloride	No Federal Standard	No designation

Sources: EPA 2018 (federal); CARB 2017 (state).
Notes: Attainment = meets the standards; Attainment/Maintenance = achieve the standards after a nonattainment designation; Nonattainment = does not meet the standards; Unclassified or Unclassifiable = insufficient data to classify; Unclassifiable/Attainment = meets the standard or is expected to be meet the standard despite a lack of monitoring data.

Toxic Air Contaminants

The state Air Toxics Program was established in 1983 under AB 1807 (Tanner). The California TAC list identifies more than 700 pollutants, of which carcinogenic and noncarcinogenic toxicity criteria

have been established for a subset of these pollutants pursuant to the California Health and Safety Code. In accordance with AB 2728, the state list includes the (federal) HAPs. The Air Toxics "Hot Spots" Information and Assessment Act of 1987 (AB 2588) seeks to identify and evaluate risk from air toxics sources; however, AB 2588 does not regulate air toxics emissions. TAC emissions from individual facilities are quantified and prioritized. "High-priority" facilities are required to perform a health risk assessment, and if specific thresholds are exceeded, are required to communicate the results to the public in the form of notices and public meetings.

In 2000, CARB approved a comprehensive Diesel Risk Reduction Plan to reduce emissions of diesel particulate matter (DPM) from both new and existing diesel-fueled vehicles and engines (CARB 2000). The regulation is anticipated to result in an 80% decrease in statewide diesel health risk in 2020 compared with the diesel risk in 2000. Additional regulations apply to new trucks and diesel fuel, including the On-Road Heavy Duty Diesel Vehicle (In-Use) Regulation, the On-Road Heavy Duty (New) Vehicle Program, the In-Use Off-Road Diesel Vehicle Regulation, and the New Off-Road Compression-Ignition (Diesel) Engines and Equipment program. All of these regulations and programs have timetables by which manufacturers must comply and existing operators must upgrade their diesel powered equipment. Several Airborne Toxic Control Measures (ATCMs) that reduce diesel emissions include In-Use Off-Road Diesel-Fueled Fleets (13 CCR 2449 et seq.) and In-Use On-Road Diesel-Fueled Vehicles (13 CCR 2025).

Local Regulations

Placer County Air Pollution Control District

The PCAPCD regulates many sources of air pollutants and is responsible for implementing certain programs and regulations for controlling air pollutant emissions to improve air quality and attain NAAQS and CAAQS. Various development projects have the potential to generate air pollutants that would result in adverse environmental impacts. In order to evaluate air pollutant emissions from development projects, the PCAPCD recommends significance thresholds for emissions of ROG, NO_x, CO, and PM_{10}. The PCAPCD recommends significance thresholds as listed in Table 12-5, expressed in pounds per day, which serve as air quality standards that may be used in the evaluation of air quality impacts associated with development projects. These thresholds were included in the 2017 update to their CEQA Air Quality Handbook.

Table 12-5
PCAPCD Significance Thresholds for Criteria Pollutants

Pollutant	Construction Threshold	Operational Threshold	Operational Cumulative-Level Threshold
	Pounds per Day		
ROG	82	55	55
NO_X	82	55	55
PM_{10}	82	82	82

Source: PCAPCD 2017a

The PCAPCD recommends that a project would not result in significant project-level criteria pollutant emissions of ROG, NO_x, and $PM_{10,}$ for which the region is designated non-attainment if it does not exceed the construction and operational significance thresholds. In addition, a project would not be considered to be cumulatively considerable and would result in a less-than-significant cumulative impact if it does not exceed the PCAPCD cumulative-level significance thresholds.

Ozone Attainment Plan

For air quality planning purposes, western Placer County is classified as a severe non-attainment area for O_3. The "severe" classification triggers various plan submittal requirements and transportation performance standards. One such requirement is that the PCAPCD update the Clean Air Plan every three years to reflect progress in meeting the air quality standards and to incorporate new information regarding the feasibility of control measures and new emission inventory data. The PCAPCD's record of progress in implementing previous measures must also be reviewed. The *Sacramento Regional 8-Hour Ozone Attainment and Reasonable Further Progress Plan (Draft 2017 SIP Revisions)* (PCAPCD et al 2017b), demonstrates how existing and new control strategies would provide the necessary future emission reductions to meet the federal 8-hour O_3 standard. The Ozone Attainment Plan is the currently adopted and applicable air quality plan for the region. Therefore, the PCAPCD, along with other local air districts in the Sacramento region, is required to comply with and implement the Ozone Attainment Plan.

Triennial Progress Report

To comply with the planning requirements of the California Clean Air Act, the PCAPCD has prepared several triennial progress reports that build upon the Air Quality Attainment Plan adopted in 1991. The *2015 Triennial Progress Report* (SMAQMD 2016) is the most recent report. The triennial progress report, like the Ozone Attainment Plan, includes a current emission inventory and projected future inventories of ROG and NO_x emissions in Placer County. The future inventories reflect future growth rates of population, travel, employment, industrial/commercial

activities, and energy use, as well as controls imposed through local, state, and federal emission reduction measures. The Triennial Report discusses rules that the PCAPCD has amended or adopted during the previous 3 years, incentive programs that have been implemented, and other measures that would supplement those in the Ozone Attainment Plan to achieve annual emission reductions required by the Clean Air Act.

The Triennial Report indicates that a majority of ROG and NO_x emission in the County come from mobile sources. Additionally, emission trends within the County show a 47% decrease in ROG emissions from 39 tons per day to 21 tons per day and a 43% decrease in NO_x emissions from 36 tons per day to 21 tons per day between 1990 and 2015.

PCAPCD Rules and Regulations

Appendices B and D of the PCAPCD CEQA Air Quality Handbook include an all-inclusive list of rules and regulations required and recommended for all projects.[2] Project proponents are responsible for compliance with the adopted PCAPCD rules. To facilitate rule compliance, the City includes applicable rules as standard notes on improvement plans, grading plans, or design review permits.

A general summary of the key PCAPCD rules and regulations is presented below.

Rule 202 – Visible Emissions: Rule 202 limits the amount of time during which air pollutant emissions of a certain shade of darkness or degree of opacity may be discharged, specifically to no more than 3 minutes in any 1 hour.

Rule 205 – Nuisance: Rule 205 prohibits a discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public.

Rule 217 – Cutback and Emulsified Asphalt Paving Materials: Rule 217 limits the VOC (ROG) content of asphalt paving materials used in the district.

Rule 218 – Architectural Coatings: Rule 218 requires that architectural coatings supplied, sold, offered for sale, applied, solicited for application, or manufactured for use within the PCAPCD area meet specified maximum VOC (ROG) content levels.

Rule 228 – Fugitive Dust: Rule 228 is intended to reduce the amount of particulate matter entrained in the ambient air, or discharged into the ambient air, as a result of anthropogenic (man-made)

[2] In addition, a complete listing of all PCAPCD rules can be found at http://www.placer.ca.gov/Departments/Air/Rules.aspx.

fugitive dust sources by requiring actions to prevent, reduce, or mitigate fugitive dust emissions. The provisions of Rule 228 apply to any activity or man-made condition capable of generating fugitive dust within Placer County.

Rule 246 – Natural Gas-Fired Water Heaters: Rule 246 is intended to limit the emission of NO_x from natural-gas-fired water heaters.

Rule 501 – General Permit Requirements: Rule 501 provides an orderly procedure for the review of new sources of air pollution, and modification and operation of existing sources, through the issuance of permits.

Auburn/Bowman Community Plan

The *Auburn/Bowman Community Plan's* Air Quality section of the Environmental Resources Management Element provides guidance in land use and development policies for implementation by the PCAPCD. The following *Auburn/Bowman Community Plan* policies are applicable to the proposed project:

Goals IV.B.6.a

2. Protect and improve air quality in the Auburn area.
3. Assure Placer County's compliance with state and federal air quality standards.

Policy 6.B.5 Use Indirect Source Control Program strategies for all subsequent, new or revised land uses within the Plan area to reduce emissions. These are to be developed in the EIR for the Plan area and applied through individual land use performance standards.

Policy 6.B.6 Use Direct Source Review as outlined in the EIR for the Plan to reduce emissions from existing land uses.

Policy 6.B.7 Produce mitigations for air quality impacts associated with adoption of the Community Plan and include them in the monitoring plan.

Policy 6.B.9 Projects which result in 200 or more trip-ends may require an air quality analysis to be submitted for review and approval.

Placer County General Plan

The *Placer County General Plan* Transportation Element and Air Quality section of the Natural Resources Element provides guidance in land use and development policies for implementation by the PCAPCD. The following General Plan policies are applicable to the proposed project:

Goal 3.C To maximize the efficient use of transportation facilities so as to: 1) reduce travel demand on the County's roadway system; 2) reduce the amount of investment required in new or expanded facilities; 3) reduce the quantity of emissions of pollutants from automobiles; and 4) increase the energy-efficiency of the transportation system.

Policy 3.C.1 The County shall promote the use of transportation systems management (TSM) programs that divert automobile commute trips to transit, walking, and bicycling.

Policy 3.C.2 The County shall promote the use, by both the public and private sectors, of TSM programs that increase the average occupancy of vehicles.

Policy 3.C.3 The County shall work with other responsible agencies to develop other measures to reduce vehicular travel demand and meet air quality goals.

Policy 3.C.4 During the development review process, the County shall require that proposed projects meet adopted Trip Reduction Ordinance (TRO) requirements.

Goal 3.D To provide a safe, comprehensive, and integrated system of facilities for non-motorized transportation.

Policy 3.D.1 The County shall promote the development of a comprehensive and safe system of recreational and commuter bicycle routes that provides connections between the County's major employment and housing areas and between its existing and planned bikeways.

Policy 3.D.3 The County shall pursue all available sources of funding for the development and improvement of trails for non-motorized transportation (bikeways, pedestrian, and equestrian).

Policy 3.D.4 The County shall promote non-motorized travel (bikeways, pedestrian, and equestrian) through appropriate facilities, programs, and information.

Policy 3.D.5 The County shall continue to require developers to finance and install pedestrian walkways, equestrian trails, and multi-purpose paths in new development, as appropriate.

Policy 3.D.7 The County shall, where appropriate, require new development to provide sheltered public transit stops, with turnouts.

Policy 3.D.10 Consider the accessibility and accommodation of cycle and pedestrian traffic, where appropriate, on and across major thoroughfares.

Policy 3.D.12 Provide safe and comfortable routes for walking, cycling, and where feasible, public transportation, to encourage use of these modes of transportation, enable convenient and active travel as part of daily activities, reduce pollution, and meet the needs of all users of the roadway system.

Goal 6.F To protect and improve air quality in Placer County.

Policy 6.F.2 The County shall develop mitigation measures to minimize stationary source and area source emissions.

Policy 6.F.5 The County shall encourage project proponents to consult early in the planning process with the County regarding the applicability of countywide indirect and area wide source programs and transportation control measures (TCM) programs. Project review shall also address energy-efficient building and site designs and proper storage, use, and disposal of hazardous materials.

Policy 6.F.6 The County shall require project level environmental review to include identification of potential air quality impacts and designation of design and other appropriate mitigation measures or offset fees to reduce impacts. The County shall dedicate staff to work with project proponents and other agencies in identifying, ensuring the implementation of, and monitoring the success of mitigation measures.

Policy 6.F.7 The County shall encourage development to be located and designated to minimize direct and indirect air pollutants.

Policy 6.F.8 The County shall submit development proposals to the PCAPCD for review and comment in compliance with CEQA prior to consideration by the appropriate decision-making body.

Policy 6.F.9 In reviewing project applications, the County shall consider alternatives or amendments that reduce emissions of air pollutants.

Policy 6.F.10 The County may require new development projects to submit an air quality analysis for review and approval. Based on this analysis, the County shall

require appropriate mitigation measures consistent with the PCAPCD's 1991 Air Quality Attainment Plan (or updated edition).

Policy 6.F.11 The County shall apply the buffer standards described on page 20 in Part I of this Policy Document and meteorological analysis to provide separation between possible emission/nuisance sources (such as industrial and commercial uses) and residential uses.

Goal 6.G To integrate air quality planning with the land use and transportation planning process.

6.G.1 The County shall require new development to be planned to result in smooth flowing traffic conditions for major roadways. This includes traffic signals and traffic signal coordination, parallel roadways, and intra- and inter-neighborhood connections where significant reductions in overall emissions can be achieved.

6.G.3 The County shall encourage the use of alternative modes of transportation by incorporating public transit, bicycle, and pedestrian modes in County transportation planning and by requiring new development to provide adequate pedestrian and bikeway facilities.

12.3 PROJECT IMPACTS

Significance Criteria

The significance criteria used to evaluate the project impacts to air quality are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to air quality would occur if the project would:

1. Conflict with or obstruct implementation of the applicable air quality plan.
2. Violate any air quality standard or contribute substantially to an existing or projected air quality violation.
3. Result in a cumulatively considerable new increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative threshold emissions which exceed quantitative thresholds for ozone precursors).
4. Expose sensitive receptors to substantial pollutant concentrations.
5. Create objectionable odors affecting a substantial number of people.

Impact Analysis

Impact 12-1	Would the project conflict with or obstruct implementation of the applicable air quality plan?		
	PCGC Master Plan Update	*Health and Human Services Building*	*Multifamily Residential Project*
Level of Significance:	Less than significant	Less than significant	Less than significant
Mitigation Measures:	None required	None required	None required
Significance after Mitigation:	Less than significant	Less than significant	Less than significant

PCGC Master Plan Update

As previously discussed, the project site is under the jurisdiction of the PCAPCD within the SVAB. The SVAB is designated nonattainment for both federal and State ozone standards. Accordingly, the PCAPCD, along with other local air districts in the SVAB, is required to comply with and implement the SIP to demonstrate when and how the region can attain the federal O_3 standards. As such, the PCAPCD, along with the other air districts in the region, prepared the Sacramento *Regional 8-Hour Ozone Attainment and Reasonable Further Progress Plan (Draft 2017 SIP Revisions)*. The Ozone Attainment Plan addresses attainment of the federal 8-hour O_3 standard, while the 2015 Triennial Report and Air Quality Plan Revision address attainment of the California 1-hour and 8-hour O_3 standards (SMAQMD 2016). These are the latest plans adopted by the PCAPCD in coordination with the air quality management districts and air pollution control districts of El Dorado, Sacramento, Solano, Sutter, and Yolo counties, and they incorporate land use assumptions and travel demand modeling provided by Sacramento Area Council of Governments (SACOG). The purpose of a consistency finding is to determine if a project is inconsistent with the assumptions and objectives of the regional air quality plans, and thus if it would interfere with the region's ability to comply with federal and state air quality standards. In general, projects are considered consistent with, and would not conflict with or obstruct implementation of the air quality plan if the growth in socioeconomic factors is consistent with the underlying regional plans used to develop the air quality management plan.

Demographic growth forecasts for various socioeconomic categories (e.g., population, housing, employment by industry) were developed by SACOG for its Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS) (SACOG 2016a) based on general plans for cities and counties in the SVAB. The air quality management plans rely on the land use and population projections provided in the MTP/SCS, which is generally consistent with the local plans; therefore, the air quality management plans are generally consistent with local government plans.

As discussed in Chapter 5, Land Use, the Auburn/Bowman Community Plan anticipates that the PCGC property would be developed with a range of uses, including continued county services and offices, private offices, retail, and residential. To accomplish this under the proposed PCGC Master Plan, the County proposes to amend the Auburn/Bowman Community Plan to increase the maximum allowable residential density within the project site. Under the existing Community Plan and zoning requirements, the maximum residential density within the site would be 15 dwelling units per acre. The proposed PCGC Master Plan Update Development Standards would allow a density of 30 dwelling units per acre within the Multifamily Residential Thematic Area and the Mixed Use Thematic Area, as shown on Figure 3-8 in Chapter 3, Project Description. These areas cover approximately 41 acres of the project site; both are currently zoned CPD. The proposed project would alter the zoning designation for these areas by applying a TC zoning overlay to the eastern portion of the campus, as shown in Figure 3-6 in Chapter 3, Project Description. To allow development within the TC zoning overlay area to exceed the densities of the underlying Commercial Planned Development zoning district and to exceed the 15 units per acre limit currently set by the Community Plan, the County proposes to amend the Auburn/Bowman Community Plan to recognize that the proposed PCGC Master Plan Update defines the allowable land use types and densities within the PCGC campus. This amendment would affect only the PCGC campus and would bring the proposed PCGC Master Plan Update into consistency with the Auburn/Bowman Community Plan and with the Placer County Zoning Ordinance.

As discussed in Chapter 5, Land Use and Planning, the Auburn/Bowman Community Plan anticipates development of a mixed-use community within the PCGC property. The proposed PCGC Master Plan Update is expected to accommodate approximately 485 dwelling units. Based on the County's average population per household of 2.68, at build-out of the PCGC Master Plan Update, the PCGC could accommodate 1,300 residents. The community plan projected a population of 31,200 and 37,186 people for the planning area in 2010 (based on an assumption of either a 2.1% or 3.0% annual growth rate). This correlates to a need of approximately 3,930 to 6,147 new housing units (County of Placer 1999). The housing constructed under the proposed project would increase the supply of multifamily housing in the area consistent with the Auburn/Bowman Community Plan and the Placer County General Plan. Additionally as discussed in Chapter 6, Population and Housing, the number of housing units within the unincorporated areas of the County increased by 19.1% between 2000 and 2018 while the number of housing units in the City of Auburn increased by 15.6% and the number of housing units in other incorporated jurisdictions within the County increased by 88.7%

As previously discussed, the proposed project is requesting a General Plan Amendment to re-designate the site to increase the maximum allowable density for multifamily residential land uses. Although the proposed project would result in more intense development (15 dwelling units per acre versus 30 dwelling units per acre) compared to how the site could be developed under the existing land use and zoning designations, the proposed project would not generate more population

growth than has been anticipated for the project region. SACOG's population estimate for the project area in 2020 is 28,360 and the forecasted population in 2030 (the closest year SACOG has available data to a project build-out of 2035) is 32,463. Therefore, SANDAG's projections anticipated approximately 4,103 new residents in the project area over a 10-year period (SACOG 2016b). In comparison the proposed PCGC Master Plan Update is expected to build-out over a 20-year period, with most of the residential development anticipated to occur in years 5 through 15. Further, as discussed in Chapter 6, Population and Housing, in determining the Regional Housing Needs Allocation (RHNA) for Placer County, SACOG found there would be a need for 5,031 new housing units within unincorporated Placer County, minus the Tahoe region, for the 2013 to 2021 planning period. As shown in the County's Annual Housing Element Progress Report for 2017 (County of Placer 2018), the County added 39 affordable housing units in 2017 and would need to an additional 3,366 new housing units to attain the County's 2021 RHNA target. In order to meet the RHNA within the 2013 to 2021 planning period, the County would need to create approximately 1,122 new housing units per year (County of Placer 2017).

While the proposed project was not included in the underlying growth estimates for the County used as the basis for the MTP/SCS, it would not conflict with or obstruct implementation of the MTP/SCS because the SACOG population projections for County would accommodate more growth (4,103 new residents) than that associated with the proposed project (1,300 residents). Further, a portion of the residential units within the proposed project would help the County in achieving the level of affordable housing needs as established by SACOG. Finally, by developing a wide mix of uses within close proximity to each other as well as existing government services and commercial land uses, the project would support non-motorized transportation which could help reduce air pollutant emissions. Implementation of the proposed project would not result in significant population growth that would substantially exceed any established growth projections. As such, population resulting due to the proposed project would be more or less consistent with the population projections of SACOG and impacts relating to the project's potential to conflict with or obstruct implementation of the applicable air quality management plan would be **less than significant**.

Health and Human Services Building

The Health and Human Services building would accommodate the existing 435 employees as well as the anticipated growth in employment within the County's Health and Human Services division over the next 20 years. As discussed in Chapter 3, Project Description, it is expected that the Health and Human Services building would accommodate 142 more employees over existing employment levels, for a total of 577 employees. Employment growth that would be accommodated within the Health and Human Services building is a result of the population growth anticipated to occur in the region, and would not induce additional growth. As discussed in Chapter 6, Population and Housing, compared to the existing residential population in the unincorporated North Auburn

community and the adjacent City of Auburn, the Health and Human Services building would not generate a substantial increase in regional population or jobs and thus would not directly or indirectly lead to adverse environmental effects associated with population and employment growth. Therefore, the Health and Human Services building would not generate substantial population and employment that was not accounted for in the local plans such as the County's General Plan or SACOG's MTP/SCS. Thus impacts relating to the proposed project's potential to conflict with or obstruct implementation of the applicable air quality management plan would be **less than significant**.

Multifamily Residential Project

The Multifamily Residential project at 1st Street and B Avenue is projected to develop up to 100 new dwelling units, which could accommodate approximately 268 new residents. This is consistent with the Auburn/Bowman Community Plan and the Placer County General Plan because the Multifamily Residential project would develop new housing units which would contribute to meeting the need for approximately 3,930 to 6,147 new housing units in the project area as previously discussed. The Multifamily Residential project would offer dwelling units at below-market rates and therefore would also support the County in attaining the RHNA targets for the current planning cycle, which ends in 2021. Furthermore, the Multifamily Residential project would not generate substantial population and employment that was not accounted for in the local plans such as the County's General Plan or SACOG's MTP/SCS. Thus impacts relating to the proposed project's potential to conflict with or obstruct implementation of the applicable air quality management plan would be **less than significant**.

Impact 12-2	**Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation?**		
	Master Plan Update	*Health and Human Services Building*	*Multifamily Residential*
Level of Significance:	Less than significant	Less than significant	Less than significant
Mitigation Measures:	None required	None required	None required
Significance after Mitigation:	Less than significant	Less than significant	Less than significant

Construction and operation of the proposed project would result in the emissions of criteria air pollutants that may cause exceedances of federal and state ambient air quality standards or contribute to existing nonattainment of ambient air quality standards. The following discussion identifies potential short- and long-term impacts that would result from implementation of the proposed project.

PCGC Master Plan Update

Construction

Emissions from construction activities were estimated using CalEEMod. As stated in Chapter 3, implementation of the PCGC Master Plan Update is expected to occur incrementally. Phasing for development is planned in four segments, resulting in an estimated build-out of the proposed project by 2035. Accordingly, construction emissions were modeled by each project component in four separate phases, which are referred to as tiers in the PCGC Master Plan Update: Phase 1 (2019–2021), Phase 2 (2024–2025), Phase 3 (2029–2031), and Phase 4 (2034-2035). Phase 1 includes construction of the new Health and Human Services building and the Multifamily Residential project (buildings R1, R1.1, R2, and R2.1), which are assessed in detail within this chapter as separate projects. Specific construction schedule sequencing and subphases for the remaining phases have not yet been determined; therefore, a conceptual construction schedule was developed for the purpose of air quality modeling as shown in Table 12-6.

Subsequent to preparation of the air quality modeling, a second multifamily residential project was moved into Phase 1, as shown in Figure 3-9, Tiering Plan. This project site includes approximately four acres located in the southwestern corner of the PCGC property and is estimated to support approximately 45 dwelling units. However the County has not identified any specific developers for this project and no detailed site planning has begun. Thus it is not expected that construction of this project would occur in the same year that construction of the other Phase 1 projects occurs, and thus there would not be an emissions increase on the worst-case day in any of the construction years. The analysis in this section and in the following Health and Human Services and Multifamily Residential Project sections assume that the residential development in the southwest corner of the site would occur in Phase 2. If this project is constructed towards the middle or end of Phase 1, the daily emissions during Phase 2 construction would be less than what is reported here; and because the project would not be constructed in the same year as the Health and Human Services Building and Multifamily Residential Project, this phasing change would also not result in an increase in daily emissions during Phase 1 construction.

Table 12-6
PCGC Master Plan Update Construction Schedule (Phases 2 – 4)

Phase Type	Start Date	End Date	Number of Days/Week	Total Days
Phase 2				
Demolition	01/01/2024	03/22/2024	5	60
Site Preparation	03/23/2024	04/19/2024	5	20
Grading	04/20/2024	05/31/2024	5	30
Paving	06/01/2024	06/28/2024	5	20
Building Construction	06/29/2024	08/22/2025	5	300

Table 12-6
PCGC Master Plan Update Construction Schedule (Phases 2 – 4)

Phase Type	Start Date	End Date	Number of Days/Week	Total Days
Architectural Coating	01/26/2025	08/22/2025	5	150
Phase 3				
Demolition	01/01/2029	02/09/2029	5	30
Site Preparation	02/10/2029	03/09/2029	5	20
Grading	03/09/2029	05/11/2029	5	45
Paving	05/12/2029	06/29/2029	5	35
Building Construction	06/30/2029	05/30/2031	5	500
Architectural Coating	06/15/2030	05/30/2031	5	250
Phase 4				
Demolition	01/01/2034	01/27/2034	5	20
Site Preparation	01/28/2034	02/10/2034	5	10
Grading	02/11/2034	03/10/2034	5	20
Paving	03/11/2034	04/07/2034	5	20
Building Construction	04/08/2034	02/23/2035	5	230
Architectural Coating	09/16/2034	02/23/2035	5	115

Source: Appendix G

The equipment fleet is based on CalEEMod default assumptions for specific pieces of equipment to be utilized during each construction subphase, except for the inclusion of trenchers during the building construction phase, which would account for utility work. For the purposes of air quality modeling, it was generally assumed that heavy construction equipment would be operating at the site for approximately 8 hours per day, 5 days per week (22 days per month), during project construction. Default construction worker, vendor trips, haul truck trips, and trip lengths as provided in CalEEMod were utilized. It was assumed all soil during grading activities would be balanced on-site and no soil import or export would be required. Specific CalEEMod assumptions for each model scenario, including quantity of equipment, are provided in Appendix G. These assumptions are summarized Table 12-7.

Table 12-7
PCGC Master Plan Update Construction Scenario Assumptions (Phases 2 – 4)

Construction Phase	One-Way Vehicle Trips			Equipment	Quantity	Usage Hours
	Maximum Daily Worker Trips	*Maximum Daily Vendor Truck Trips*	*Total Haul Truck Trips*			
Phase 2						
Demolition	16	0	764	Concrete/Industrial Saw	1	8
				Excavators	3	8
				Rubber Tired Dozers	2	8

Table 12-7
PCGC Master Plan Update Construction Scenario Assumptions (Phases 2 – 4)

Construction Phase	One-Way Vehicle Trips			Equipment	Quantity	Usage Hours
	Maximum Daily Worker Trips	*Maximum Daily Vendor Truck Trips*	*Total Haul Truck Trips*			
Site Preparation	18	0	0	Rubber Tired Dozers	3	8
				Tractors/Loaders/Backhoes	4	8
Grading	20	0	0	Excavators	2	8
				Grader	1	8
				Rubber Tired Dozer	1	8
				Scrapers	2	8
				Tractors/Loaders/Backhoes	2	8
Paving	16	0	0	Pavers	2	8
				Paving Equipment	2	8
				Rollers	2	8
Building Construction	186	84	0	Crane	1	7
				Forklifts	3	8
				Generator Sets	1	8
				Tractors/Loaders/Backhoes	3	7
				Trencher	1	8
				Welder	1	8
	38	0	0	Air Compressor	1	6
Phase 3						
Demolition	16	0	124	Concrete/Industrial Saw	1	8
				Excavators	3	8
				Rubber Tired Dozers	2	8
Site Preparation	18	0	0	Rubber Tired Dozers	3	8
				Tractors/Loaders/Backhoes	4	8
Grading	20	0	0	Excavators	2	8
				Grader	1	8
				Rubber Tired Dozer	1	8
				Scrapers	2	8
				Tractors/Loaders/Backhoes	2	8
Paving	16	0	0	Pavers	2	8
				Paving Equipment	2	8
				Rollers	2	8
Building Construction	230	76	0	Crane	1	7
				Forklifts	3	8
				Generator Sets	1	8
				Tractors/Loaders/Backhoes	3	7

Table 12-7
PCGC Master Plan Update Construction Scenario Assumptions (Phases 2 – 4)

Construction Phase	One-Way Vehicle Trips			Equipment	Quantity	Usage Hours
	Maximum Daily Worker Trips	*Maximum Daily Vendor Truck Trips*	*Total Haul Truck Trips*			
				Trencher	1	8
				Welder	1	8
Architectural Coatings	46	0	0	Air Compressor	1	6
Phase 4						
Demolition	16	0	204	Concrete/Industrial Saw	1	8
				Excavators	3	8
				Rubber Tired Dozers	2	8
Site Preparation	18	0	0	Rubber Tired Dozers	3	8
				Tractors/Loaders/Backhoes	4	8
Grading	16	0	0	Excavator	1	8
				Grader	1	8
				Rubber Tired Dozer	1	8
				Tractors/Loaders/Backhoes	3	8
Paving	16	0	0	Pavers	2	8
				Paving Equipment	2	8
				Rollers	2	8
Building Construction	114	46	0	Crane	1	7
				Forklifts	3	8
				Generator Sets	1	8
				Tractors/Loaders/Backhoes	3	7
				Trencher	1	8
				Welder	1	8
Architectural Coatings	24	0	0	Air Compressor	1	6

Source: Appendix G

Construction of the proposed project would generate construction-related air pollutant emissions from entrained dust, equipment and vehicle exhaust emissions, asphalt pavement, and architectural coatings. Exhaust from internal combustion engines used by construction equipment, vendor trucks (delivery trucks), haul trucks, and worker vehicles would result in emissions of ROG, NO_x, and PM_{10}. Construction of the proposed project would also generate CO, SO_x and $PM_{2.5}$ emissions; however, only the criteria air pollutants that the PCAPCD have adopted thresholds for are presented in Table 12-5, though all criteria air pollutant emissions are included in Appendix G.

Entrained dust results from the exposure of earth surfaces to wind from the direct disturbance and movement of soil, resulting in PM_{10} and $PM_{2.5}$ emissions. To account for compliance with PCAPCD Rule 228 (fugitive dust), it was assumed that the active sites would be watered at least twice daily, or as necessary depending on weather conditions. The application of architectural coatings, such as exterior/interior paint and other finishes, would also produce VOC (ROG) emissions. The proposed project would comply with the requirements of PCAPCD Rule 218 (Architectural Coatings), which sets a cap for the VOC content in paint of 100 grams of VOC per liter of coating for non-flat coatings.

Predicted construction emissions for the worst-case day for each of the construction years are presented in Table 12-8 and are compared to the PCAPCD significance thresholds.

Table 12-8
Maximum Daily Construction Criteria Air Pollutant Emissions
Proposed PCGC Master Plan Build-Out (Phases 2 – 4)

Year	ROG	NO_x	PM_{10}
	Pounds per Day		
2024	3.30	32.43	9.59
2025	20.03	23.79	4.59
2029	2.97	27.98	9.45
2030	19.32	16.13	4.71
2031	19.25	16.06	4.71
2034	6.05	14.22	8.80
2035	5.88	12.97	2.47
Maximum Daily	**20.03**	**32.43**	**9.59**
PCAPCD threshold	*55*	*55*	*82*
Threshold exceeded?	No	No	No

Notes: ROG = reactive organic gas; NO_x = oxides of nitrogen; PM_{10} = coarse particulate matter; PCAPCD = Placer County Air Pollution Control District.
The values shown are the maximum summer or winter daily emissions results from CalEEMod.
These estimates reflect implementation of PCAPCD Rule 228, which assumes watering of the site two times per and Rule 218 that limits the VOC content of architectural coatings to 100 g/L.
Emissions presented in the above table are provided in the "mitigated" CalEEMod output because the estimates include emission reductions associated with required compliance with regulations, but are not actual mitigation measures.
Source: Appendix G

As shown in Table 12-8, daily unmitigated construction emissions associated with Phases 2 through 4 would not exceed the PCAPCD thresholds for ROG, NO_x, or PM_{10}. As such, construction of the proposed project would result in a **less than significant** impact.

Operations

Operation of the proposed project would produce ROG, NO_x, CO, SO_x, PM_{10}, and $PM_{2.5}$ emissions from area sources, including natural gas combustion, use of consumer products, and motor vehicle trips to project land uses. The proposed project would primarily impact air quality through vehicular traffic generated by residents, employees, and visitors. The estimation of proposed operational emissions was based on proposed land use defaults and total area (i.e., square footage) of buildings and residential dwelling units that would be in operation by 2036 (first year of full operation after build-out).

Area Sources

CalEEMod was used to estimate operational emissions from area sources, which includes emissions from consumer product use, architectural coatings, and landscape maintenance equipment. Emissions associated with natural gas usage are calculated in the building energy use, which is described in the following "Energy Source" section below.

Consumer products are chemically formulated products used by household and institutional consumers, including detergents; cleaning compounds; polishes; floor finishes; cosmetics; personal care products; home, lawn, and garden products; disinfectants; sanitizers; aerosol paints; and automotive specialty products. Other paint products, furniture coatings, or architectural coatings are not considered consumer products (CAPCOA 2017). Consumer product VOC emissions are estimated in CalEEMod for nonresidential land uses based on the floor area of buildings and the default factor of pounds of VOC emissions per building square foot per day.

VOC off-gassing emissions result from evaporation of solvents contained in surface coatings such as in paints and primers using during building maintenance. CalEEMod calculates the VOC evaporative emissions from application of nonresidential surface coatings based on the VOC emission factor, building square footage, assumed fraction of surface area, and reapplication rate. The VOC emission factor is based on the VOC content of the surface coatings, and the PCAPCD Rule 218 (Architectural Coatings) governs the VOC content for interior and exterior coatings. The PCAPCD recommends VOC rates of 100 grams per liter for nonflat coatings. Consistent with CalEEMod defaults, it is assumed that the surface area for painting equals 2.0 times the floor square footage, with 75% assumed for interior coating and 25% assumed for exterior surface coating. For areas that include pavement, the architectural coating area is assumed to be 6% of the total square footage, consistent with the supporting CalEEMod studies provided as an appendix to the CalEEMod User's Guide (CAPCOA 2017). The model default reapplication rate of 10% of area per year is assumed.

Landscape maintenance includes fuel combustion emissions from equipment such as lawn mowers, rototillers, shredders/grinders, blowers, trimmers, chain saws, and hedge trimmers. The emissions associated with landscape equipment use are estimated based on CalEEMod default

values for emission factors (grams per square foot of building space per day) and number of summer days (when landscape maintenance would generally be performed) and winter days as a conservative measure. For Placer County, the average annual summer days are estimated to be 180 days (CAPCOA 2017).

Energy Sources

As represented in CalEEMod, energy sources include emissions associated with building electricity and natural gas usage (non-hearth). Electricity use would contribute indirectly to criteria air pollutant emissions; however, the emissions from electricity use are only quantified for GHGs in CalEEMod since criteria pollutant emissions occur at the site of the power plant, which is typically off site. For the proposed project, the estimated energy use was based on CalEEMod default values. CalEEMod 2016.3.2 uses the 2016 version of Title 24 as a basis for energy modeling. The new 2019 Title 24 standards will go to into effect January 1, 2020; therefore, using the 2016 Title 24 standards as provided in CalEEMod 2016.3.2 as a basis for energy modeling would be conservative.

Vehicular Traffic

As provided in the Transportation Impact Study (TIS) completed for the proposed project (Appendix E), the project is estimated to generate a total average daily vehicle miles traveled (VMT) of 16,234 miles. Emissions associated with project-generated daily traffic were modeled with CalEEMod using the trip-generation provided in the TIS. CalEEMod default data, including temperature, trip characteristics, variable start information, emissions factors, and trip distances were conservatively used for the model inputs. Project-related traffic was assumed to include a mixture of vehicles in accordance with the model outputs for traffic. Emission factors representing the vehicle mix and emissions for 2036 (the first full year of operation after build-out) were used to estimate emissions associated with the proposed project.

Table 12-9 presents the maximum daily emissions associated with operation of the proposed project. The values shown are the maximum summer or winter daily emissions results from CalEEMod. Details of the emission calculations are provided in Appendix G. The estimated existing PCGC facilities emissions in 2015 were subtracted from the proposed project emissions, and the net change in emissions is compared with PCAPCD significance thresholds.

Table 12-9
Maximum Daily Operational Criteria Air Pollutant Emission
Proposed PCGC Master Plan Update Build-out[1]

Year	ROG	NO_x	PM_{10}
	Pounds per Day		
Project Build-out			
Area Sources	22.33	6.14	0.67
Energy	0.39	3.47	0.27
Motor Vehicles	17.96	133.00	97.54
Total Project Build-out Emissions	*39.98*	*138.57*	*95.01*
Existing Facilities			
Total Existing Facilities Emissions	*16.87*	*72.34*	*52.14*
Net Increase (Project Build-out minus Existing Facilities)	**23.81**	**70.27**	**46.34**
PCAPCD threshold	*55*	*55*	*82*
Threshold exceeded?	No	**Yes**	No

Notes: ROG = reactive organic gas; NO_x = oxides of nitrogen; PM_{10} = coarse particulate matter; PCAPCD = Placer County Air Pollution Control District.
The values shown are the maximum summer or winter daily emissions results from CalEEMod.
These estimates reflect implementation of Rule 218 which limits the VOC content of architectural coatings to 100 g/L.
1 PCGC Master Plan build-out scenario includes operational emissions associated with Phases 2 through 4.
Source: Appendix G

As shown in Table 12-9, ROG and PM_{10} emissions would be less than the applied thresholds on a daily basis, whereas NO_x emissions would exceed the PCAPCD daily thresholds of significance. Build-out of the proposed project would have a **potentially significant impact** on regional air quality without mitigation. Implementation of Mitigation Measures 12a and 12b would ensure that the net maximum daily operational levels of NO_x emissions do not exceed PCAPCD's thresholds of 55 lbs/day. Mitigation Measure 12a would require project features to be included into the proposed project's design such as the development of a system of pedestrian and bicycle facilities throughout the project site and providing alternatives to driving. Furthermore, Mitigation Measure 12b requires that the County and each individual project applicant implement a program to offset operational NO_x emissions such that the project's net emissions are below the PCAPCD significance threshold. Therefore, implementation of Mitigation Measures 12a and 12b would reduce this impact to **less than significant** level.

Health and Human Services Building

Construction

Emissions from construction activities associated with development of the Health and Human Services Building were estimated using CalEEMod. Specific construction schedule sequencing and subphases for the this building have not yet been determined; therefore, a conceptual construction schedule was developed for the purpose of air quality modeling as shown in Table 12-10.

Table 12-10
Health and Human Services Building Construction Schedule

Phase Type	Start Date	End Date	Number of Days/Week	Total Days
Demolition	07/01/2019	08/09/2019	5	30
Site Preparation	08/10/2019	09/06/2019	5	20
Grading	09/07/2019	11/08/2019	5	45
Paving	11/09/2019	12/06/2019	5	20
Building Construction	12/07/2019	10/16/2020	5	225
Architectural Coating	08/08/2020	10/16/2020	5	50

Source: Appendix G

Specific CalEEMod assumptions for each construction phase, including quantity of equipment, are provided in Appendix G. These assumptions are summarized Table 12-11.

Table 12-11
Health and Human Services Building Construction Scenario Assumptions

Construction Phase	One-Way Vehicle Trips			Equipment	Quantity	Usage Hours
	Maximum Daily Worker Trips	*Maximum Daily Vendor Truck Trips*	*Total Haul Truck Trips*			
Demolition	16	0	144	Concrete/Industrial Saw	1	8
				Excavators	3	8
				Rubber Tired Dozers	2	8
Site Preparation	18	0	0	Rubber Tired Dozers	3	8
				Tractors/Loaders/Backhoes	4	8
Grading	20	0	0	Excavators	2	8
				Graders	1	8
				Rubber Tired Dozers	1	8
				Scrapers	2	8
				Tractors/Loaders/Backhoes	2	8
Paving	16	0	0	Pavers	2	8

Table 12-11
Health and Human Services Building Construction Scenario Assumptions

Construction Phase	One-Way Vehicle Trips			Equipment	Quantity	Usage Hours
	Maximum Daily Worker Trips	*Maximum Daily Vendor Truck Trips*	*Total Haul Truck Trips*			
				Paving Equipment	2	8
				Rollers	2	8
Building Construction	236	96	0	Crane	1	7
				Forklifts	3	8
				Generator Set	1	8
				Tractors/Loaders/Backhoes	3	7
				Trencher	1	8
				Welder	1	8
Architectural Coating	48	0	0	Air Compressors	1	6

Source: Appendix G

Construction of the Health and Human Services building would generate construction-related air pollutant emissions from entrained dust, equipment and vehicle exhaust emissions, asphalt pavement, and architectural coatings.

Predicted construction emissions for the worst-case day for each of the construction years are presented in Table 12-12 and are compared to the PCAPCD significance thresholds.

As shown in Table 12-12, daily unmitigated construction emissions would not exceed the PCAPCD thresholds for ROG, NO_x, or PM_{10}. As such, construction of the Health and Human Services building would result in a **less than significant** impact.

Table 12-12
Maximum Daily Construction Criteria Air Pollutant Emissions – Health and Human Services Building

Year	ROG	NO_x	PM_{10}
	Pounds per Day		
2019	4.86	54.61	10.75
2020	35.49	36.60	5.79
Maximum Daily	**35.49**	**54.61**	**10.75**
PCAPCD threshold	*82*	*82*	*82*
Threshold exceeded?	No	No	No

Notes: ROG = reactive organic gas; NO_x = oxides of nitrogen; PM_{10} = coarse particulate matter; PCAPCD = Placer County Air Pollution Control District.
The values shown are the maximum summer or winter daily emissions results from CalEEMod.
These estimates reflect implementation of PCAPCD Rule 228, which assumes watering of the site two times per and Rule 218 that limits the VOC content of architectural coatings to 100 g/L.
Emissions presented in the above table are provided in the "mitigated" CalEEMod output because the estimates include emission reductions associated with required compliance with regulations, but are not actual mitigation measures.
Source: Appendix G

Operations

Operation of the Health and Human Services building would produce ROG, NO_x, CO, SO_x, PM_{10}, and $PM_{2.5}$ emissions from area sources, including natural gas combustion, use of consumer products, and motor vehicle trips to project land uses. The general descriptions of these sources is provided in the PCGC Master Plan discussion above. The Health and Human Services building would primarily impact air quality through vehicular traffic. The estimation of proposed operational emissions was based on proposed land use defaults and total area (i.e., square footage) of buildings that would be in operation by 2021.

As provided in the TIS, the Health and Human Services building is estimated to generate 4,582 weekday trips (Fehr and Peers 2018). Emissions associated with project-generated daily traffic were modeled with CalEEMod using the weekday trip-generation estimates. CalEEMod default data was utilized for other parameters, including temperature, trip characteristics, variable start information, trip distances, and emissions factors were conservatively used for the model inputs. Project-related traffic was assumed to include a mixture of vehicles in accordance with the model outputs for traffic. Emission factors representing the vehicle mix and emissions for 2021 (the first full year of operation) were used to estimate emissions associated with the Health and Human Services building.

Table 12-13 presents the maximum daily emissions associated with the operation of the Health and Human Services building. The values shown are the maximum summer or winter daily

emissions results from CalEEMod. Complete details of the emissions calculations are provided in Appendix G.

Table 12-13
Maximum Daily Operational Criteria Air Pollutant Emissions
Health and Human Services Building

Year	ROG	NO_x	PM_{10}
	Pounds per Day		
Proposed Health and Human Services Building			
Area Sources	4.03	<0.01	<0.01
Energy	0.07	0.60	0.05
Motor Vehicles	7.61	43.83	18.38
Total Health and Human Services Building Emissions	11.71	44.43	18.43
Existing Health and Human Services Building			
Total Existing Health and Human Services Building Emissions	*11.87*	*45.91*	*14.71*
Net increase (Health and Human Services Building minus Existing)	**(0.16)**	**(1.48)**	**3.72**
PCAPCD threshold	*55*	*55*	*82*
Threshold exceeded?	No	No	No

Notes: ROG = reactive organic gas; NO_x = oxides of nitrogen; PM_{10} = coarse particulate matter; PCAPCD = Placer County Air Pollution Control District.
The values shown are the maximum summer or winter daily emissions results from CalEEMod.
These estimates reflect implementation of Rule 218 which limits the VOC content of architectural coatings to 100 g/L.
Source: Appendix G

As shown in Table 12-13, daily net operational emissions would not exceed the PCAPCD thresholds for ROG, NO_x, and PM_{10}. As such, the Health and Human Services building would result in a **less than significant** impact in regards to operational impacts.

Multifamily Residential Project

Construction

Emissions from construction activities associated with the Multifamily Residential project were estimated using CalEEMod. Specific construction schedule sequencing and subphases for the Multifamily Residential project have not yet been determined; therefore, a conceptual construction schedule was developed for the purpose of air quality modeling as shown in Table 12-14. It was assumed that earthwork and paving activities at the Multifamily Residential site would occur and were estimated under the same activities for the Health and Human Services Building construction, described above. Upon completion of the Health and Human Services building, vertical building

construction for the Multifamily Residential project would occur immediately thereafter, which is assessed below.

Table 12-14
Multifamily Residential project Construction Schedule

Phase Type	Start Date	End Date	Number of Days/Week	Total Days
Building Construction	10/17/2020	08/20/2021	5	220
Architectural Coating	06/26/2021	08/20/2021	5	40

Source: Appendix G

Default construction worker, vendor trips, haul truck trips, and trip lengths as provided in CalEEMod were utilized. Specific CalEEMod assumptions for each model scenario, including quantity of equipment, are provided in Appendix G. These assumptions are summarized Table 12-15.

Table 12-15
Multifamily Residential project Construction Scenario Assumptions

Construction Phase	One-Way Vehicle Trips			Equipment	Quantity	Usage Hours
	Maximum Daily Worker Trips	*Maximum Daily Vendor Truck Trips*	*Total Haul Truck Trips*			
Building Construction	72	12	0	Crane	1	7
				Forklifts	3	8
				Generator Set	1	8
				Tractors/Loaders/Backhoes	3	7
				Trencher	1	8
				Welder	1	8
Architectural Coating	14	0	0	Air Compressors	1	6

Source: Appendix G

Vertical construction of the Multifamily Residential project would generate construction-related air pollutant emissions from equipment and vehicle exhaust emissions and architectural coatings.

Predicted construction emissions for the worst-case day for each of the construction years for the Multifamily Residential development are presented in Table 12-16 and are compared to the PCAPCD significance thresholds.

Table 12-16
Maximum Daily Construction Criteria Air Pollutant Emissions – Multifamily Residential project

Year	ROG	NO_x	PM_{10}
	Pounds per Day		
2020	2.97	24.63	2.41
2021	34.26	24.03	2.49
Maximum Daily	**34.26**	**24.63**	**2.49**
PCAPCD threshold	*82*	*82*	*82*
Threshold exceeded?	No	No	No

Notes: ROG = reactive organic gas; NO_x = oxides of nitrogen; PM_{10} = coarse particulate matter; PCAPCD = Placer County Air Pollution Control District.
The values shown are the maximum summer or winter daily emissions results from CalEEMod.
These estimates reflect implementation of PCAPCD Rule 228, which assumes watering of the site two times per and Rule 218 that limits the VOC content of architectural coatings to 100 g/L.
Emissions presented in the above table are provided in the "mitigated" CalEEMod output because the estimates include emission reductions associated with required compliance with regulations, but are not actual mitigation measures.

Source: Appendix GAs shown in Table 12-16, daily unmitigated construction emissions would not exceed the PCAPCD thresholds for ROG, NO_x, or PM_{10}. As such, construction of the Multifamily Residential project would result in a **less than significant** impact.

Operations

Operation of the Multifamily Residential project would produce ROG, NO_x, CO, SO_x, PM_{10}, and $PM_{2.5}$ emissions from area sources, including natural gas combustion, use of consumer products, and motor vehicle trips to project land uses. The general descriptions of these sources is provided in the PCGC Master Plan Update discussion above. The Multifamily Residential project would primarily impact air quality through vehicular traffic. The estimation of proposed operational emissions was based on proposed land use defaults, number of dwelling units, and total area (i.e., square footage) that would be in operation by 2022.

As provided in the TIS, the Multifamily Residential project is estimated to generate 730 weekday trips (Appendix E). CalEEMod default Saturday and Sunday trip-generation rates were adjusted based on weekday trip-generation rates per land use type, because weekend trip-generation rates were not provided in the TIS. Furthermore, CalEEMod default trip distances were adjusted to match the total average daily VMT (2,016 miles). Other CalEEMod default data, including temperature, trip characteristics, variable start information, and emissions factors were conservatively used for the model inputs. Project-related traffic was assumed to include a mixture of vehicles in accordance with the model outputs for traffic. Emission factors representing the

vehicle mix and emissions for 2022 (the first full year of operation) were used to estimate emissions associated with the Multifamily Residential project.

Table 12-16 presents the maximum daily emissions associated with the operation of the Multifamily Residential project. The values shown are the maximum summer or winter daily emissions results from CalEEMod. Complete details of the emissions calculations are provided in Appendix G.

Table 12-17
Maximum Daily Operational Criteria Air Pollutant Emissions – Multifamily Residential project

Year	ROG	NO_x	PM_{10}
	Pounds per Day		
Area Sources	2.91	1.59	0.17
Energy	0.03	0.25	0.02
Motor Vehicles	1.13	6.01	1.64
Total	**4.07**	**7.85**	**1.83**
PCAPCD threshold	*55*	*55*	*82*
Threshold exceeded?	No	No	No

Notes: ROG = reactive organic gas; NO_x = oxides of nitrogen; PM_{10} = coarse particulate matter; PCAPCD = Placer County Air Pollution Control District.
The values shown are the maximum summer or winter daily emissions results from CalEEMod.
These estimates reflect implementation of Rule 218 which limits the VOC content of architectural coatings to 100 g/L.
Source: Appendix G

As shown in Table 12-17, daily operational emissions would not exceed the PCAPCD thresholds for ROG, NO_x, and PM_{10} at full build-out. As such, the Multifamily Residential project would result in a **less than significant** impact in regards to operational impacts.

Impact 12-3	Would the project result in a cumulatively considerable new increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative threshold emissions which exceed quantitative thresholds for ozone precursors)?		
	Master Plan Update	*Health and Human Services Building*	*Multifamily Residential*
Level of Significance:	Less than significant	Less than significant	Less than significant
Mitigation Measures:	None required	None required	None required
Significance after Mitigation:	Less than significant	Less than significant	Less than significant

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The cumulative context of an air pollutant is dependent on the specific pollutant being considered. O_3 precursors are a regional pollutant; this means that O_3 precursors generated in one location do not necessarily have O_3 impacts in that area. Instead, precursors from across the region can combine in the upper atmosphere and be transported by winds to various portions of the air basin. Consequently, all O_3 precursors generated throughout the air basin are part of the cumulative context and the geographic region in which cumulative O_3 impacts are considered is the entire Sacramento Federal Nonattainment Area (SFNA) for O_3. The SFNA includes the counties of Sacramento, Yolo, Solano (partial), Sutter (partial), Placer (except Lake Tahoe Air Basin), and El Dorado (except Lake Tahoe Air Basin). The PCAPCD establishes emissions thresholds for regional emissions.

For operational cumulative impacts associated with nonattainment pollutants, a project whose operational emissions would not exceed the PCAPCD cumulative significance thresholds (depicted in Table 12-5) would not be considered cumulatively considerable and would be less than significant. As presented in Table 12-9, the proposed project's net operational emissions (proposed project minus existing facilities emissions) would exceed the PCAPCD cumulative thresholds of significance without mitigation. Therefore, the proposed project's operational activities would be cumulatively considerable and the contribution to cumulative impacts would be **potentially significant**. Implementation of Mitigation Measures 12a and 12b would ensure that NO_x emissions would be reduced to a **less than significant** level.

Health and Human Services Building

As presented in Table 12-13, the proposed Health and Human Services building's operational emissions would not exceed the PCAPCD cumulative-level thresholds of significance and thus

would not be cumulatively considerable. Therefore, the Health and Human Services building's contribution to cumulative impacts during would be **less than significant**.

Multifamily Residential Project

As presented in Table 12-17, the Multifamily Residential project operational emissions would not exceed the PCAPCD cumulative-level thresholds of significance and thus would not be cumulatively considerable. Therefore, the Multifamily Residential project contribution to cumulative impacts would be **less than significant**.

Impact 12-4	**Would the project expose sensitive receptors to substantial pollutant concentrations?**		
	PCGC Master Plan Update	*Health and Human Services Building*	*Multifamily Residential Project*
Level of Significance:	Less than significant	Less than significant	Less than significant
Mitigation Measures:	None required	None required	None required
Significance after Mitigation:	Less than significant	Less than significant	Less than significant

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Health Impacts of Toxic Air Contaminants

Construction of the proposed project would involve the use of diesel-fueled vehicles used during site preparation, grading, building construction, paving, and application of architectural coatings. DPM is the primary TAC of concern during these construction activities. Notably, on-road diesel trucks traveling to and from the proposed project would be less of a concern because they would not stay on the site for long durations. The following measures are required by state law to reduce diesel particulate emissions:

- Fleet owners of mobile construction equipment are subject to the CARB Regulation for In-use Off-road Diesel Vehicles (Title 13 California Code of Regulations, Chapter 9, Section 2449), the purpose of which is to reduce DPM and criteria pollutant emissions from in-use (existing) off-road diesel-fueled vehicles.
- All commercial diesel vehicles are subject to Title 13, Section 2485 of the California Code of Regulations, limiting engine idling time. Idling of heavy-duty diesel construction equipment and trucks during loading and unloading shall be limited to five minutes; electric auxiliary power units should be used whenever possible.

According to the Office of Environmental Health Hazard Assessment, health risk assessments, which determine the exposure of sensitive receptors to toxic emissions, should be based on a 30-

year exposure period for the maximally exposed individual resident; however, such assessments should be limited to the period/duration of activities associated with the project. Since the proposed project involves phased construction activities in several areas across the site, the project would not require the extensive use of heavy-duty construction equipment or diesel trucks in any one location over the duration of development, which would limit the exposure of any proximate individual sensitive receptor to TACs. Due to the relatively short period of exposure at any individual sensitive receptor and minimal particulate emissions generated on-site, TACs generated during construction would not be expected to result in concentrations causing significant health risks.

As described in Chapter 16, Hazards and Hazardous Materials, of this EIR, due to the age of some of the existing buildings, demolition activities could result in the release of contaminated materials and hazardous substances such as lead-based paint or asbestos. Demolition activities could result in airborne entrainment of asbestos, particularly where structures built prior to 1980 would be demolished. However, these materials would be removed in accordance with regulatory requirements prior to demolition which establishes survey, notification, and work practice requirements to prevent asbestos emissions during building demolition. In addition, implementation of Mitigation Measure 16a would ensure any potential lead-based paint or asbestos materials would be handled appropriately and that potential exposure would be less than significant.

Carbon Monoxide Hotspot

Mobile source impacts occur basically on two scales of motion. Regionally, project-related travel will add to regional trip generation and increase the VMT within the local airshed and the SVAB. Locally, project traffic will be added to the Placer County roadway system adjacent to the proposed project and within the proposed project itself. If such traffic occurs during periods of poor atmospheric ventilation, is composed of a large number of vehicles "cold-started" and operating at pollution-inefficient speeds, and is operating on roadways already crowded with non-project traffic, there is a potential for the formation of microscale CO hotspots in the area immediately around points of congested traffic. Because of continued improvement in vehicular emissions at a rate faster than the rate of vehicle growth and/or congestion, the potential for CO hotspots in the SVAB is steadily decreasing.

CO transport is extremely limited and disperses rapidly with distance from the source. Under certain extreme meteorological conditions, however, CO concentrations near a congested roadway or intersection may reach unhealthy levels, affecting sensitive receptors such as residents, school children, hospital patients, and older adults. Typically, high CO concentrations are associated with roadways or intersections operating at an unacceptable level of service (LOS). Projects contributing to adverse traffic impacts may result in the formation of such CO hotspots.

To verify that the project would not cause or contribute to a violation of the CO standards, a screening evaluation of the potential for CO hotspots was conducted. The California Department of Transportation (Caltrans) and the U.C. Davis Institute of Transportation Studies *Transportation Project-Level Carbon Monoxide Protocol* (CO Protocol) (Caltrans 1997), and the PCAPCD *CEQA Air Quality Handbook* (PCAPCD 2017a) were followed. PCAPCD outlines the following criteria in order to determine whether a CO hotspots analysis is typically warranted (1) the traffic study for the project indicates that the peak-hour LOS on one or more streets or at one or more intersections (both signalized and non-signalized) in the project vicinity will be degraded from an acceptable LOS (e.g., A, B, C, or D) to an unacceptable LOS (e.g., E or F); and (2) the traffic study indicates that the project would substantially worsen an already existing unacceptable peak-hour LOS on one or more streets or at one or more intersections in the project vicinity. "Substantially worsen" includes situations where delay would increase by 10 seconds or more with project-generated traffic included.

The proposed project's TIS evaluated the potential transportation and circulation impacts resulting from the implementation of the proposed project. The TIS evaluated seventeen intersections for four different scenarios which included existing conditions, existing plus build-out of project, cumulative without project, and cumulative plus build-out of project. According to the CO Protocol, there is a cap on the number of intersections that need to be analyzed for any one project. For a single project with multiple intersections, only the three intersections representing the worst LOS ratings of the project, and to the extent they are different intersections, the three intersections representing the highest traffic volumes, need be analyzed. For each intersection failing a screening test as described in this protocol, an additional intersection should be analyzed (Caltrans 1997).

The following three study area intersections would operate at an unacceptable LOS and were determined to be the most impacted for each scenario. The potential impact of the proposed project on local CO levels was assessed at these intersections with the Caltrans CL4 interface based on the California LINE Source Dispersion Model (CALINE4), which allows microscale CO concentrations to be estimated along each roadway corridor or near intersections (Caltrans 1998a).

1. (Cumulative Plus PCGC Master Plan Update) Intersection #6 – State Route 49 and Bell Road for PM peak hour
2. (Cumulative Plus PCGC Master Plan Update) Intersection #15 – State Route 49 and Atwood Road for PM peak hour
3. (Cumulative Plus PCGC Master Plan Update) Intersection #16 – State Route 49 and Kemper Road/New Airport Road for PM peak hour

The modeling analysis was performed for worst-case wind angle, in which the model selects the wind angles that produce the highest CO concentrations at each of the receptors. The suburban land classification of 40 inches (100 centimeters) was used for the aerodynamic roughness coefficient, which determines the amount of local air turbulence that affects plume spreading. The

at-grade option was used in the analysis; for at-grade sections, CALINE4 does not permit the plume to mix below ground level. The mixing zone, which is defined as the width of the roadway plus 10 feet (3 meters) on either side, was estimated for each roadway using Google Earth (2018). The calculations assume a mixing height of 3,280 feet (1,000 meters), a flat topographical condition between the source and the receptor (link height of 0 meters), and a meteorological condition of little to almost no wind (1 meter per second), consistent with Caltrans guidance (Caltrans 1998b).

The vehicle emission factor was predicted using CARB's mobile source emissions inventory model, EMFAC2014, and represents the weighted average emission rate of the local Placer County vehicle fleet expressed in grams per mile per vehicle. Consistent with the TIS, emission factors for 2036 were used in the CALINE4 model. Emission factors were based on a 10-mile-per-hour (mph) average speed for all of the intersections, a temperature of 41.7°F,[3] and an average humidity of 55%. The hourly traffic volume anticipated to travel on each link, in units of vehicles per hour, was based on the TIS. Complete modeling assumptions are included in Appendix G.

Four receptor locations at each intersection were modeled to determine CO ambient concentrations. Each receptor was assumed to be located on the sidewalk at each corner of the modeled intersections. Receptors represent the possibility of extended outdoor exposure at locations adjacent to the modeled intersections. CO concentrations were modeled at these locations (highest recorded traffic volumes for each scenario) to assess the maximum potential CO exposure that could occur in 2036. A receptor height of 5.9 feet (1.8 meters) was used in accordance with Caltrans recommendations for all receptor locations (Caltrans 1998b).

The highest 1-hour CO concentration of 2.3 parts per million (ppm) from the last three years was used as the ambient CO background concentration. A persistence factor of 0.6, as is recommended for suburban locations, was applied to the output values of predicted concentrations in parts per million at each of the receptor locations.

The results of the model are shown in Table 12-18. Model input and output data are provided in Appendix G.

[3] The Caltrans Institute of Transportation Studies *Transportation Project-Level Carbon Monoxide Protocol* (CO Protocol) (Caltrans 1997) guidance is to use the smallest mean minimum temperature observed in January over the past 3 years plus the temperature adjustment for the geographic location and time period. The smallest mean minimum at the Auburn station was 36.7°F in January 2017 (WRCC 2017). Assuming a 5°F correction factor for both AM and PM traffic conditions, average morning and evening temperature would be approximately 41.7°F (Caltrans 1997).

Table 12-18
CALINE4 Predicted Carbon Monoxide Concentrations

Intersection	Maximum Modeled Impact Long-Term 2036 (ppm)	
	1-hour	*8-hour*
(Cumulative Plus Master Plan SR 49 and Bell Rd (PM peak hour)	2.4	1.44
(Cumulative Plus Master Plan SR 49 and Atwood Rd (PM peak hour)	2.4	1.44
(Cumulative Plus Master Plan SR 49 and Kemper Rd/New Airport Road (PM peak hour)	2.4	1.44

Notes: CO = carbon monoxide; ppm = parts per million.
Modeled concentrations reflect background 1-hour concentration of 2.3 ppm.
8-hour concentrations were obtained by multiplying the 1-hour concentration by a factor of 0.6, as referenced in Caltrans 1997, Table B.15.
Source: Caltrans 1998a (CALINE4).

As shown in Table 12-17, maximum CO concentration predicted for the 1-hour averaging period would be 2.8 ppm, which is below the state 1-hour CO standard of 20 ppm. Maximum predicted 8-hour CO concentrations at each of the impacted intersections would be below the state CO standard of 9 ppm. Neither the 1-hour nor 8-hour state standard would be equaled or exceeded at any of the intersections studied. Accordingly, CO hotspot impacts would be **less than significant**.

Health and Human Services Building

The Health and Human Services building would not generate a substantial amount of traffic that would contribute to potential adverse traffic impacts that may result in the formation of CO hotspots. In addition, due to continued improvement in vehicular emissions at a rate faster than the rate of vehicle growth and/or congestion, the potential for CO hotspots in SVAB is steadily decreasing. Therefore, further analysis is not required and impacts would be **less than significant**.

Multifamily Residential Project

The Multifamily Residential project would not generate a substantial amount of traffic that would contribute to potential adverse traffic impacts that may result in the formation of CO hotspots. In addition, due to continued improvement in vehicular emissions at a rate faster than the rate of vehicle growth and/or congestion, the potential for CO hotspots in SVAB is steadily decreasing. Therefore, further analysis is not required and impacts would be **less than significant**.

Impact 12-5	Would the project create objectionable odors affecting a substantial number of people?		
	PCGC Master Plan Update	*Health and Human Services Building*	*Multifamily Residential Project*
Level of Significance:	Less than significant	Less than significant	Less than significant
Mitigation Measures:	None required	None required	None required
Significance after Mitigation:	Less than significant	Less than significant	Less than significant

PCGC Master Plan Update

The occurrence and severity of potential odor impacts depends on numerous factors. The nature, frequency, and intensity of the source; the wind speeds and direction; and the sensitivity of receiving location each contribute to the intensity of the impact. Although offensive odors seldom cause physical harm, they can be annoying and cause distress among the public and generate citizen complaints.

Potential odors produced during construction would be attributable to concentrations of unburned hydrocarbons from tailpipes of construction equipment, architectural coatings, and asphalt pavement application. In general, odors are highest near the source, but disperse quickly resulting in a reduced offsite exposure. Sensitive receptors located proximate to the proposed construction sites may be affected. However, construction of the proposed project would use typical construction techniques in compliance with PCAPCD rules and any odors associated with project construction activities would be temporary and would cease upon completion of construction. Therefore, impacts associated with odors during construction would be less than significant.

In regards to operations and land use compatibility, odor impacts are addressed qualitatively based on odor screening distances as recommended by PCAPCD guidance. Certain highly odiferous sources have screening distances of two miles. These include wastewater treatment plants, sanitary landfills, and certain industrial facilities (petroleum refineries, asphalt batch plants, and chemical manufacturing). Other odor sources have screening distances of one mile and include recycling and waste transfer stations, coffee roasters, and food processing facilities (PCAPCD 2017a). The proposed project involves development of commercial and residential uses that would not result in sources commonly associated with odors. Typical odors generated from operation of the proposed project would include vehicle exhaust generated by residents, employees, or customers traveling to and from the proposed project, through the periodic use of landscaping or maintenance equipment, from the temporary storage of typical solid waste (refuse). It is expected that project-generated refuse would be stored in covered containers and removed at regular intervals in compliance with the County's solid waste regulations. Therefore, impacts associated with odors generated from operations would be less than significant.

Health and Human Services Building

Diesel fumes from construction equipment and delivery trucks are often found to be objectionable; however, construction is temporary and diesel emissions are minimal and regulated. Typical urban projects such as commercial uses generally do not result in substantial objectionable odors when operated in compliance with County Ordinances (e.g., proper trash disposal and storage). The Health and Human Services building does not contain any uses or activities that would cause the generation of substantial unpleasant odors. Thus, construction and operation of the Health and Human Services building would not result in the creation of objectionable odors affecting a substantial number of people nor would the project site be affected by any existing objectionable odors. Impacts related to odors are **less than significant**.

Multifamily Residential Project

As with the Health and Human Services building, the Multifamily Residential project does not contain any uses or activities that would cause the generation of substantial unpleasant odors. Furthermore, the nearest existing source of odors within the project area are the Placer County WWTP and Recology Auburn Placer disposal facility, which are located approximately 1.5 miles and 1.0 miles from the Multifamily Residential project. Because future residents would be located within the PCAPCD's 2-mile screening distance for a wastewater treatment plant and a 1-mile screening for a landfill, this is a potentially significant impact. Therefore, the PCAPCD was contacted to determine an odor complaint history for both the Placer County WWTP and Recology Auburn Placer facilities. A review of the complaint history shows no complaints within a three-year period for both facilities (PCAPCD 2018). Therefore, the Multifamily Residential project would not create or expose a substantial number of people to objectionable odors and this impact would be **less than significant**.

12.5 MITIGATION MEASURES

Mitigation Measure 12a The County and future project applicants for individual projects shall incorporate the following measures to reduce emissions associated with vehicle trip generation and area sources from the proposed project:

- Include exterior outlets on all nonresidential and residential buildings to allow the use of electrically-powered landscape equipment.
- Provide secure bicycle racks and/or storage within nonresidential and residential building entrances.
- Provide preferential parking for carpool, shared, electric, and hydrogen vehicles.

- Include pedestrian-friendly paths and cross walks in all parking lots.
- Install two 110/208 volt power outlets for every two loading docks.

Mitigation Measure 12b The County and future project applicants for individual projects shall implement one of the following off-site mitigation measures prior to issuance of certificates of occupancy for each building constructed on-site:

- Establish mitigation off-site within the portion of Placer County that is within the SVAB by participating in an off-site mitigation program, coordinated through PCAPCD. Examples include, but are not limited to retrofitting, repowering, or replacing heavy duty engines from mobile sources (e.g., busses, construction equipment, on-road haulers); or other programs that the project proponent may propose to reduce emissions.
- Participate in PCAPCD's Off-site Mitigation Program by paying the equivalent amount of fees for the project's contribution of NO_x that exceeds the operational threshold of 55 lbs/day. The applicable fee rates changes over time. At the time of writing this EIR, the fee rate is $18,260 per ton emitted during the ozone season. The actual amount to be paid shall be determined, and satisfied per current CARB guidelines, at the time of recordation of the Final Map (residential projects), or issuance of a Building Permit (non-residential projects).

12.6 REFERENCES CITED

13 CCR 2025. Regulation to Reduce Emissions of Diesel Particulate Matter, Oxides of Nitrogen and Other Criteria Pollutants, from In-Use Heavy-Duty Diesel-Fueled Vehicles.

13 CCR 2449–2449.3 and Appendix A. General Requirements for In-Use Off-Road Diesel-Fueled Fleets.

17 CCR 93000. Substances Identified as Toxic Air Contaminants. In Subchapter 7, Toxic Air Contaminants.

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